

*Application No. 10/642,591
Amendment dated June 15, 2009
Reply to Office Action of March 16, 2009*

*Docket No.: 0020-5166P
Art Unit: 3731
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AMENDMENTS TO THE DRAWINGS

Three sheets of Replacements Drawings are attached at the end of this Amendment in order to remove the designations for left-handed spiral wire 311a and right-handed spiral wire 311b in the Replacement Figs. 3, 5, and 13 filed on December 1, 2008.

The alleged new matter of the Replacement Figs. filed on December 1, 2008 has now been removed.

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REMARKS

Applicants thank the Examiner for the thorough consideration given the present application. Claims 1 and 3-9 are pending. Claim 2 was previously cancelled. Claim 1 is amended merely to remove the features added in the Reply filed on December 1, 2009. Claim 1 is independent. The Examiner is respectfully requested to reconsider the rejections in view of the amendments and remarks set forth herein.

Reasons for Entry of Amendments

At the outset, it is respectfully requested that this Amendment be entered into the Official File in view of the fact that the amendments to the claims automatically place the application in condition for allowance.

In the alternative, if the Examiner does not agree that this application is in condition for allowance, it is respectfully requested that this Amendment be entered for the purpose of appeal. This Amendment reduces the issues on appeal by placing the claims in compliance with 35 U.S.C. § 112, first paragraph. This Amendment was not presented at an earlier date in view of the fact that Applicants did not fully appreciate the Examiner's position until the Final Office Action was reviewed.

Amendments to the Drawings

Three sheets of Replacements Drawings are attached at the end of this Amendment in order to remove the designations for left-handed spiral wire 311a and right-handed spiral wire 311b in Figs. 3, 5, and 13. The alleged new matter of the Replacement Figs. filed on December 1, 2008 has now been removed.

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Amendments to the Specification

Paragraph [0041] of the specification has been amended in order to remove reference to the left-handed spiral wire 311a and right-handed spiral wire 311b, as filed in paragraph [0041] in the Reply filed on December 1, 2008.

The alleged new matter contained in paragraph [0041] in the Reply filed on December 1, 2009 has now been removed.

Rejection Under 35 U.S.C. § 112, first paragraph

Claims 1 and 3-9 stand rejected under 35 U.S.C. § 112, first paragraph. This rejection is respectfully traversed.

In order to overcome this rejection, Applicants have amended claim 1 to remove the alleged new matter contained in this claim in the Reply filed on December 1, 2009.

Applicants respectfully submit that the claims, as amended, are fully supported by and adequately described in the written description of the invention. Accordingly, reconsideration and withdrawal of this rejections under 35 U.S.C. 112 first and second paragraphs are respectfully requested.

Rejections Under 35 U.S.C. § 103(a)

Claim 1, 3, 4, 7, and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Khosravi (U.S. Patent 6,361,546) in view of Brooks et al. (U.S. Patent 6,346,116); and

Claims 5 and 6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Khosravi in view of Brooks et al., and further in view of Rosenbluth (WO 99/56801).

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These rejections are respectfully traversed.

Arguments Regarding Independent Claim 1

Among the distinguishing features of the invention set forth in independent claim 1 are

1) A flexible shaft (i.e., a wire-like member) is provided at a distal portion thereof with a thrombus capture member including a crossed wire member and a filter.

2) The crossed wire member is fixed at the proximal end thereof to the flexible shaft but slidably mounted at the distal end thereof on the flexible shaft. Thus, the distal end of the crossed wire member is allowed to move backward and forward between a position where the thrombus capture member is in a contracted state (see Fig. 7 or 8) and a position where the thrombus capture member is in an original expanded state (see Fig. 9 or 10) when the thrombus capture member is housed in the sheath or taken out of the sheath (see paragraphs 0046 to 0048). In fact, the distal end of the crossed wire member is provided with a slide ring assembly (33) including an inner ring (331) and an outer ring (332), and thus the crossed wire member is expanded or contracted by sliding movement of the inner ring (331) along the flexible shaft.

In contrast therewith, Khosravi discloses a vascular filter (10) comprising an elongate tubular member (12), an expandable frame (14) composed of a plurality of

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struts (24) and attached to the tubular member (12), and a filter material (16) made of a woven fabric or wire frame and attached to the expandable frame (14) and/or the tubular member (12).

In this connection, the Examiner states that shaft (12) and attached member (54) together are a "wire" member since this member is very thin as indicated in column 5, lines 39-42, and elongated. That is, the combination of tubular member (12) and member (54) attached thereto is recognized as a flexible shaft corresponding to that of the present invention.

However, it is believed that the Examiner has made an error in his conclusion of the facts. In fact, a member (54) is a bumper member, which is slidably disposed within a sheath (52) to constitute a delivery device (50) (col. 5, lines 9-12) and used for pushing vascular filter (10) through outlet (66) of lumen of sheath 52 into the vessel (col. 6, lines 6-10). Although the bumper member 54 is advanced distally to push the vascular filter (10) into the vessel, the sheath (52) is withdrawn from the blood vessel along with the bumper member 54 after deployment of the vascular filter (10). In that case, the bumper member (54) is dissociated from the tubular member (12), pulled backward and then withdrawn from the blood vessel, leaving the vascular filter (10) in place as indicated in Fig. 2C and Fig. 2D. In addition, it is required to use an independent guide wire 68 for the introduction of the delivery device 50 into the blood vessel.

Accordingly, it is clear that the combination of tubular member (12) of the vascular filter 10 and bumper member (54) of Khosravi differs in construction and function from

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the flexible shaft of the present invention.

Although Brooks et al. teaches that basket frame (42) is secured preferably at its proximal end (46) and distal end (48) to guide wire (50), basket frame (42) is fixed on the guide wire at a longitudinal position (col. 4, lines 21-30). In fact, the filter assembly (12) of Brooks et al. is collapsed within the sheath as shown in Fig. 2, from which it can be seen that the distal portion of the filter assembly 12 is turned in the sheath along the guide wire. Similarly, the vascular filter (10) of Khosravi is collapsed within the sheath.

On the other hand, the crossed wire member of the present invention is fixed at the proximal end to the flexible shaft (wire-like member) (2) but slidably mounted at the distal end thereof on the flexible shaft as mentioned above. Further, once the flexible shaft (2) is introduced into the blood vessel and set in place, the flexible shaft (2) is held in place along with the thrombus capture member during treatment, though the thrombus capture member is expanded or contracted by the sliding movement of the slide ring on the flexible shaft when the sheath is pulled in the direction of the proximal end of shaft (2) or pushed in the direction of the distal side of the shaft (2) while keeping the shaft (2) in place.

At least for the reasons explained above, Applicants respectfully submit that the combination of elements as set forth in independent claim 1 is not disclosed or made obvious by the prior art of record, including Khosravi and Brooks et al.

Therefore, independent claim 1 is in condition for allowance.

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Dependent Claims

All dependent claims are in condition for allowance due to their dependency from allowable independent claims, or due to the additional novel features set forth therein.

Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are respectfully requested.

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CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. It is believed that a full and complete response has been made to the outstanding Office Action, and that the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, he is invited to telephone Carl T. Thomsen (Reg. No. 50,786) at (703) 208-4030 (direct line).

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly extension of time fees.

Dated: June 15, 2009

Respectfully submitted,

By 

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Attachment: Three sheets of Replacement Drawings (Figs. 3, 5, and 13).


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